Structures and Applied Mechanics Technical Group  
(STAM – TG)  
(February 07, 2010)

List of courses for graduate programs in the Structures and Applied Mechanics Technical Group:

(A) **Focus Area: Applied Mechanics**
(Graduate School Area of Concentration: Applied Mechanics)

**Core Courses --- (must take all three)**

- CE 5122 (CE 322) - Advanced Mechanics of Materials
- CE 5150 (CE 359) - Structural Vibrations
- CE 5164/ME 5520 (CE 366/ME 380) - Finite Element Methods in Applied Mechanics I

**Elective Core courses (Courses from other related Focus Area or Area of Concentration in the CEE Department) --- (must take at least one)**

- CE 5128 (CE 326) - Elastic Stability
- CE 5380 (CE 352) - Bridge Structures
- CE 5610 (CE 355) - Advanced Reinforced Concrete Structures
- CE 5620 (CE 353) - Advanced Steel Structures
- CE 5640 (CE 354) - Prestressed Concrete Structures

**Suggested List to fill remaining course requirement**

- CE 5128 (CE 326) - Elastic Stability *(if not taken under Elective Core course above)*
- CE 5151 - Experimental Structural Dynamics
- CE 5163 - Fracture Mechanics
- CE 5166/ME 5521 (CE 367/ME 381) - Finite Element Methods in Applied Mechanics II
- CE 5541 (CE 341) - Advanced Soil Mechanics
- CE 5543 (CE 343) - Advanced Foundation Design
- CE 5380 (CE 352) - Bridge Structures *(if not taken under Elective Core course above)*
- CE 5610 (CE 355) - Advanced Reinforced Concrete Structures *(if not taken under Elective Core course above)*
- CE 5620 (CE 353) - Advanced Steel Structures *(if not taken under Elective Core course above)*
- CE 5640 (CE 354) - Prestressed Concrete Structures *(if not taken under Elective Core course above)*
- ME 5105 (ME 305) - Basic Concept of Continuum Mechanics
- ME 5507 (ME 307) - Engineering Analysis I
- ME 6508 (ME 308) - Engineering Analysis II

and other courses in related areas as determined appropriate for the student’s thesis/dissertation research or other educational goals
(B) **Focus Area: Structural Engineering**  
(Graduate School Area of Concentration: Structural Engineering)

**Core Courses** *(must take all three)*

- CE 5122 (CE 322) - Advanced Mechanics of Materials  
- CE 5164/ME 5520 (CE 366/ME 380) – Finite Element Methods in Applied Mechanics I  
- CE 5610 (CE 355) - Advanced Reinforced Concrete Structures  
  or CE 5620 (CE 353) - Advanced Steel Structures

**Elective Core courses** *(Courses from other related Focus Area or Area of Concentration in the CEE Department)*  
*(must take at least one)*

- CE 5150 (CE 359) - Structural Vibrations  
- CE 5151 - Experimental Structural Dynamics  
- CE 5163 -- Fracture Mechanics  
- CE 5166/ME 5521 (CE 367/ME 381) – Finite Element Methods in Applied Mechanics II

**Suggested List to fill remaining course requirement**

- CE 5128 (CE 326) - Elastic Stability  
- CE 5150 (CE 359) - Structural Vibrations *(if not taken under Elective Core course above)*  
- CE 5151-- Experimental Structural Dynamics *(if not taken under Elective Core course above)*  
- CE 5163 -- Fracture Mechanics *(if not taken under Elective Core course above)*  
- CE 5166/ME 5521 (CE 367/ME 381) – Finite Element Methods in Applied Mechanics II *(if not taken under Elective Core course above)*  
- CE 5541 (CE 341) - Advanced Soil Mechanics  
- CE 5543 (CE 343) – Advanced Foundation Design  
- CE 5380 (CE 352) - Bridge Structures *(if not taken under Elective Core course above)*  
- CE 5610 (CE 355) - Advanced Reinforced Concrete Structures *(if not taken under Core course above)*  
- CE 5620 (CE 353) - Advanced Steel Structures *(if not taken under Core course above)*  
- CE 5640 (CE 354) - Prestressed Concrete Structures  
- ME 5105 (ME 305) – Basic Concept of Continuum Mechanics  
- ME 5507 (ME 307) – Engineering Analysis I  
- ME 6508 (ME 308) – Engineering Analysis II

and other courses in related areas as determined appropriate for the student’s thesis/dissertation research or other educational goals